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EXAMINER

DINH, K

ART UNIT

PAPER NUMBER

2155

DATE MAILED:

09/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/487,593

Applicant(s)
MATSUOKA

Examiner
Dinh Khanh

Art Unit
2155



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 5, 2001
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-44 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

1. This is in response to the amendment filed on 7/5/2001 (paper # 9). Claims 26-44 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 26-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno et al U.S. pat. No. 5,710,591 in view of Cohen et al, IEEE 1993, "Virtual gain for audio windows."

As to claims 26 and 29, Bruno discloses an audio conference server (ACS) comprising:

- receiving (MCU 26 fig.1) audio data from source of audio client (see fig.1 and col.1 lines 29-51).

Bruno does not specifically disclose the attenuated mixer for audio data. However, Cohen discloses a mixing means for providing distance-based attenuation according to sound decay characteristics to stimulate a distance between a distance between the source audio client and a target audio client (the distance -dependent gain parameter used in MAW (moving

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source/moving sink), see Cohen's section 1.2, distance dependent-gain and fig.3), delivering attenuated audio data to target or source audio client (transferring data to multiple audio resources, see page 85, section 0.1) and each audio client is assigned a selected decay characteristic of a plurality characteristics (transferring data to multiple audio resources and letting listeners later parameters among teleconferees, see pages 85-88). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

As to claim 27, Bruno discloses the target audio client is the same as the source audio client (see col.4 line 44 to col.5 line 40).

As to claim 28, Bruno discloses the target audio client is different than the source audio client (see col.5 line 33 to col.6 line 46).

As to claim 30, Bruno discloses the source and target audio clients are displayed as points on a viewing screen from which sound appears to emanate (see col.6 lines 1-46).

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As to claim 31, Bruno further discloses the source audio client comprises a point source audio (PSA) client that originates from stored audio data (see audio sources and the participants of the teleconference, see col.7 lines 27-64).

As to claim 32, Bruno discloses the PSA includes point sources of sound from a file or user input (see fig.2, col.6 line 47 to col.7 line 38).

As to claim 33, Bruno discloses the source audio client comprises a set-top box (STB) audio client the originates from an audio conferencing user (see col.7 lines 1-64).

As to claim 34, Bruno discloses the STB including a set-top application for controlling audio data from a microphone or speaker (see col.5 lines 8-67 and col.7 lines 27-64).

As to claim 35, Bruno discloses the target audio client comprises a set-top box (STB) audio client that originates from an audio conferencing user (see col.5 lines 8-67 and col.7 lines 27-64).

Claim 36 is rejected for the same reasons set forth in claim 34.

As to claim 37, Bruno discloses a plurality of audio clients participate in an audio conference (see col4 line 44 to col.5 line 32).

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As to claim 38, neither Bruno nor Cohen discloses using an Interface Definition Language (IDL) to delete, add participants. However, the use of IDL software is generally well known in the art. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to implement a well-known software such as IDL in the system of Bruno to add or delete participants because it would have provided the server to actively control the users' activities faster.

As to claims 39 and 40, Cohen further discloses attenuating comprises identifying a decay factor for each audio client and the decay factor is a customized decay factor. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

As to claims 41 and 42, Cohen further discloses determining a weighted value between the source audio client and the target audio client based on the source audio client's decay factor (see Cohen's section 1.2 and fig.3) and attenuating further comprising calculating a mix for the audio clients using the weighted values (i.i., calculating parameters, see Cohen's section 0.1). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume

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of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

Claim 44 is rejected for the same reasons set forth in claim 26.

4. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno and Cohen as applied to claim 26 above, and further in view of Everett US pat. No.5,864,816.

Braun and Cohen's teachings still applied as in item 4 above. Neither Braun nor Cohen discloses a fade in/fade out function (scale factors) to avoid the delivery of said data in a step-wise manner to a speaker output (see abstract, col.1 line 57 to col.2 line 22).

However, Everett discloses:

A floating point operation elimination function (see 40 of fig.2) to avoid the performance of floating point multiplication (identifying scale factor functions to determine the excess of a predetermined threshold, see col.2 lines 30-63, col.4 lines 10-54).

A stream data function to prepare stream audio (MPEG streams) for playing ambient background music or using an audio source forwarded from another conference (see fig.1, col.3 lines 20-65).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to Everett's teachings into Braun's audio system to facilitate the mixings of data streams because it would have facilitated the mixings of audio data in compressed forms.

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Response to Arguments

5. Applicant's arguments filed on 7/5/2001 have been fully considered but they are not persuasive.

* Applicants asserts that there are no teaching or suggestion in which audio data is recieved from a source audio client and attenuated based on audio decay characteristics to simulate distance between the source audio client and a target audio client, each audio client is assigned a selected decay characteristic of plurality characteristics.

Examiner respectfully disagrees. Cohen clearly discloses a mixing means for providing distance-based attenuation according to sound decay characteristics to stimulate a distance between a distance between the source audio client and a target audio client (the distance - dependent gain parameter used in MAW (moving source/moving sink), see Cohen's section 1.2, distance dependent-gain and fig.3), delivering attenuated audio data to target or source audio client (transferring data to multiple audio resources, see page 85, section 0.1) and each audio client is assigned a selected decay characteristic of a plurality characteristics (transferring data to multiple audio resources and letting listeners later parameters among teleconferees, see Cohen's pages 85-88).

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. Claims 26-44 are **rejected**.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (703) 308-8528. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh, can be reached on (703) 305-9648. The fax phone number for this group is (703) 305-7201.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

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Khanh Dinh
Patent Examiner
Art Unit 2155
9/20/2001


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